



SEQUENCE LISTING

<110> BEELEY, NIGEL R. A.  
PRICKETT, KATHRYN S.

<120> NOVEL EXENDIN AGONIST COMPOUNDS

<130> 18528.016 (238/086 US)

<140> 09/554,533

<141> 1998-11-13

<150> PCT/US98/24210

<151> 1998-11-13

<150> 60/065,442

<151> 1997-11-14

<160> 87

<170> PatentIn version 3.2

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<212> PRT

<213> Heloderma horridum

<220>

<223> C-term amidated

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His Ser Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro Ser  
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<210> 2

<211> 39

<212> PRT

<213> Helodermasuspectum

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<223> C-term amidated

<400> 2

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu

1 5 10 15  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30  
Ser Gly Ala Pro Pro Pro Ser  
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<210> 3  
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<213> Homo sapien

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<223> C-term amidated

<400> 3  
His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
1 5 10 15  
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg  
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<210> 4  
<211> 38  
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<213> Artificial Sequence

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<223> His, Arg or Tyr

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<223> Ser, Gly, Ala or Thr

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<223> Ala, Asp, or Glu

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<223> Ala, Phe, Tyr or naphthylalanine

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<223> Ala or Ser

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<223> Ala or Lys

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<223> Ala, Leu, Ile pentylglycine, Val, or Met

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<223> Ala or Leu

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<223> Phe, Tyr, or naphthylalanine

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<223> Ile, Val, Leu, pentylglycine, tert-butylglycine, or Met

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<223> Ala, Glu, or Asp

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<223> Ala, Trp, Phe, Tyr, or naphthylalanine

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<223> Ala or Leu

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N-alkylglycine, N-alkylpentylglycine,  
N-alkylalanine, or not present

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N-alkylalanine, or not present

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N-alkylglycine, N-alkylpentylglycine,  
N-alkylalanine, or not present

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<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-alkylglycine, N-alkylpentylglycine,  
N-alkylalanine, or not present

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1 5 10 15

Xaa Ala Xaa  
20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa  
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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<223> May be c-term amidated

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His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly  
20 25 30

<210> 6

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<223> May be c-term amidated

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His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Ala Ile Glu Phe Leu Lys Asn  
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<210> 7  
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<212> PRT  
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<220>  
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<223> May be c-term amidated

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His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Ala Ile Glu Phe Leu Lys Asn  
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<210> 8  
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<220>  
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<400> 8  
His Ala Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 9  
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<223> May be c-term amidated

<400> 9

His Gly Glu Gly Ala Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
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<210> 10

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<212> PRT

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<223> May be c-term amidated

<400> 10

His Gly Glu Gly Thr Ala Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
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<210> 11

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<212> PRT

<213> Artificial Sequence

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<220>

<223> May be c-term amidated

<400> 11

His Gly Glu Gly Thr Phe Thr Ala Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
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<210> 12

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<400> 12  
His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
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<400> 13  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ala Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
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His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Ala Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
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<210> 15  
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<220>  
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<400> 15  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Ala Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
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<210> 16  
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His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Ala Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
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His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Ala Glu

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10

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Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
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His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Ala  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
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<210> 19

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<223> May be c-term amidated

<400> 19

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Ala Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
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<210> 20

<211> 28

<212> PRT

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<223> May be c-term amidated

<400> 20

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Ala Arg Leu Phe Ile Glu Phe Leu Lys Asn  
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<210> 21

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<212> PRT

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<223> May be c-term amidated

<400> 21

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Ala Leu Phe Ile Glu Phe Leu Lys Asn  
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<210> 22

<211> 28

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<223> May be c-term amidated

<400> 22

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Ala Phe Ile Glu Phe Leu Lys Asn  
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<210> 23

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<223> May be c-term amidated

<400> 23

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Ala Phe Leu Lys Asn  
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<210> 24

<211> 28

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<223> May be c-term amidated

<400> 24

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Ala Leu Lys Asn  
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<210> 25

<211> 28

<212> PRT

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<223> Description of Artificial Sequence: Synthetic peptide

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<223> May be c-term amidated

<400> 25

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Ala Lys Asn  
20 25

<210> 26

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<212> PRT

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<223> Description of Artificial Sequence: Synthetic peptide

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<223> May be c-term amidated

<400> 26

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Ala Asn  
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<211> 28

<212> PRT

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<223> May be c-term amidated

<400> 27

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Ala  
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<210> 28

<211> 38

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

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<223> May be c-term amidated

<400> 28

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser

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25

30

Ser Gly Ala Pro Pro Pro  
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<210> 29  
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<220>  
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<220>  
<223> May be c-term amidated

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His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro Pro  
35

<210> 30  
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<223> May be c-term amidated

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His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro  
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<210> 31  
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<223> Description of Artificial Sequence: Synthetic peptide

<220>

<223> May be c-term amidated

<400> 31

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro Pro  
35

<210> 32

<211> 36

<212> PRT

<213> Artificial Sequence

<220>

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<220>

<223> May be c-term amidated

<400> 32

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro  
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<210> 33

<211> 36

<212> PRT

<213> Artificial Sequence

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<220>

<223> May be c-term amidated

<400> 33

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Pro  
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<210> 34

<211> 35

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

<220>

<223> May be c-term amidated

<400> 34

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala  
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<210> 35

<211> 35

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

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<223> May be c-term amidated

<400> 35

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala  
35

<210> 36  
<211> 34  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<223> May be c-term amidated

<400> 36  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly

<210> 37  
<211> 34  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<223> May be c-term amidated

<400> 37  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly

<210> 38  
<211> 33  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>

<223> May be c-term amidated

<400> 38

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser

<210> 39

<211> 33

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

<220>

<223> May be c-term amidated

<400> 39

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser

<210> 40

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<223> May be c-term amidated

<400> 40

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

<210> 41  
<211> 32  
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<220>  
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<220>  
<223> May be c-term amidated

<400> 41  
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1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

<210> 42  
<211> 31  
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<220>  
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<220>  
<223> May be c-term amidated

<400> 42  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro  
20 25 30

<210> 43  
<211> 31  
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<220>  
<223> May be c-term amidated

<400> 43  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu

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10

15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro  
20 25 30

<210> 44

<211> 30

<212> PRT

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<223> Description of Artificial Sequence: Synthetic peptide

<220>

<223> May be c-term amidated

<400> 44

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly  
20 25 30

<210> 45

<211> 29

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

<220>

<223> May be c-term amidated

<400> 45

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly  
20 25

<210> 46

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<223> May be c-term amidated

<400> 46

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly  
20 25

<210> 47

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<222> (31)

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<222> (36)..(38)

<223> thioproline

<220>

<223> May be c-term amidated

<400> 47

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa  
35

<210> 48

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<212> PRT

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<222> (36)..(38)

<223> thioproline

<220>

<223> May be c-term amidated

<400> 48

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1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala Xaa Xaa Xaa  
35

<210> 49

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<212> PRT

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<222> (31)

<223> N-methylalanine

<220>

<223> May be c-term amidated

<400> 49

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Pro Pro  
35

<210> 50

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<223> May be c-term amidated

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His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30  
Ser Gly Ala Xaa Xaa  
35

<210> 51  
<211> 37  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (31)  
<223> homoproline

<220>  
<221> MOD\_RES  
<222> (36)..(37)  
<223> homoproline

<220>  
<223> May be c-term amidated

<400> 51  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa  
35

<210> 52  
<211> 36  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (31)  
<223> homoproline

<220>  
<221> MOD\_RES  
<222> (36)  
<223> homoproline

<220>  
<223> May be c-term amidated

<400> 52  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa  
35

<210> 53  
<211> 35  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<223> May be c-term amidated

<400> 53  
Arg Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser Gly Ala  
35

<210> 54  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<223> May be c-term amidated

<400> 54  
His Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly  
20 25 30

<210> 55  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (6)  
<223> naphthalalanine

<220>  
<223> May be c-term amidated

<400> 55  
His Gly Glu Gly Thr Xaa Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 56  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<223> May be c-term amidated

<400> 56  
His Gly Glu Gly Thr Phe Ser Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 57  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<223> May be c-term amidated  
  
<400> 57  
His Gly Glu Gly Thr Phe Ser Thr Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 58  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<223> May be c-term amidated  
  
<400> 58  
His Gly Glu Gly Thr Phe Thr Ser Glu Leu Ser Lys Gln Met Ala Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn  
20 25

<210> 59  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (10)  
<223> pentylglycine

<220>  
<223> May be c-term amidated

<400> 59  
His Gly Glu Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Leu Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn  
20 25

<210> 60  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (22)  
<223> naphtylalanine

<220>  
<223> May be c-term amidated

<400> 60  
His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Xaa Ile Glu Phe Leu Lys Asn  
20 25

<210> 61  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD\_RES

<222> (23)

<223> tertiary-butylglycine

<220>

<223> May be c-term amidated

<400> 61

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Xaa Glu Trp Leu Lys Asn  
20 25

<210> 62

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<223> May be c-term amidated

<400> 62

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Asp Phe Leu Lys Asn  
20 25

<210> 63

<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<223> May be c-term amidated

<400> 63

His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser  
20 25 30

Ser

<210> 64  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<223> May be c-term amidated

<400> 64  
His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly  
20 25

<210> 65  
<211> 37  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (31)  
<223> homoproline

<220>  
<221> MOD\_RES  
<222> (36)..(37)  
<223> homoproline

<220>  
<223> May be c-term amidated

<400> 65  
His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser  
20 25 30

Ser Gly Ala Xaa Xaa  
35

<210> 66  
<211> 40  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (1)  
<223> His, Arg, Tyr, or 4-imidazopropionyl

<220>  
<221> MOD\_RES  
<222> (2)  
<223> Ser, Gly, Ala, or Thr

<220>  
<221> MOD\_RES  
<222> (3)  
<223> Ala, Asp, or Glu

<220>  
<221> MOD\_RES  
<222> (5)  
<223> Ala or Thr

<220>  
<221> MOD\_RES  
<222> (6)  
<223> Ala, Phe, Tyr, or naphthylalanine

<220>  
<221> MOD\_RES  
<222> (7)  
<223> Thr or Ser

<220>  
<221> MOD\_RES  
<222> (8)  
<223> Ala, Ser, or Thr

<220>  
<221> MOD\_RES  
<222> (9)  
<223> Asp or Glu

<220>  
<221> MOD\_RES  
<222> (10)  
<223> Ala, Leu, Ile, Val, pentylglycine, or Met

<220>  
<221> MOD\_RES  
<222> (11)  
<223> Ala or Ser

<220>  
<221> MOD\_RES  
<222> (12)  
<223> Ala or Lys

<220>  
<221> MOD\_RES  
<222> (13)  
<223> Ala or Gln

<220>  
<221> MOD\_RES  
<222> (14)  
<223> Ala, Leu, Ile, pentylglycine, Val, or Met

<220>  
<221> MOD\_RES  
<222> (15)  
<223> Ala or Glu

<220>  
<221> MOD\_RES  
<222> (16)  
<223> Ala or Glu

<220>  
<221> MOD\_RES  
<222> (17)  
<223> Ala or Glu

<220>  
<221> MOD\_RES  
<222> (19)  
<223> Ala or Val

<220>  
<221> MOD\_RES  
<222> (20)  
<223> Ala or Arg

<220>  
<221> MOD\_RES  
<222> (21)  
<223> Ala, Leu, or Lys-NH

<220>  
<221> MOD\_RES

<222> (22)  
<223> Lys, Arg, or not present

<220>  
<221> MOD\_RES  
<222> (23)  
<223> Phe, Tyr, or naphthylalanine

<220>  
<221> MOD\_RES  
<222> (24)  
<223> Ile, Val, Leu, pentylglycine, tert-butylglycine,  
or Met

<220>  
<221> MOD\_RES  
<222> (25)  
<223> Ala, Glu, or Asp

<220>  
<221> MOD\_RES  
<222> (26)  
<223> Ala, Trp, Phe, Tyr, or naphthylalanine

<220>  
<221> MOD\_RES  
<222> (27)  
<223> Ala or Leu

<220>  
<221> MOD\_RES  
<222> (28)  
<223> Lys, Asn, Lys-NH, or Ala

<220>  
<221> MOD\_RES  
<222> (29)  
<223> Asn, Lys, Arg, or Lys-NH

<220>  
<221> MOD\_RES  
<222> (30)  
<223> Asn, Lys, Arg, Ala, or not present

<220>  
<221> MOD\_RES  
<222> (31)  
<223> Gly or not present

<220>  
<221> MOD\_RES  
<222> (32)  
<223> Gly or not present

<220>  
<221> MOD\_RES  
<222> (33)  
<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-alkylglycine, N-alkylpentylglycine,  
N-alkylalanine, or not present

<220>  
<221> MOD\_RES  
<222> (34)  
<223> Ser or not present

<220>  
<221> MOD\_RES  
<222> (35)  
<223> Ser or not present

<220>  
<221> MOD\_RES  
<222> (36)  
<223> Gly or not present

<220>  
<221> MOD\_RES  
<222> (37)  
<223> Ala or not present

<220>  
<221> MOD\_RES  
<222> (38)  
<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-alkylglycine, N-alkylpentylglycine,  
N-alkylalanine, or not present

<220>  
<221> MOD\_RES  
<222> (39)  
<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-alkylglycine, N-alkylpentylglycine,  
N-alkylalanine, or not present

<220>  
<221> MOD\_RES  
<222> (40)  
<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-alkylglycine, N-alkylpentylglycine,  
N-alkylalanine, or not present

<220>  
<223> May be c-term amidated

Xaa Xaa Xaa Gly Xaa  
1 5 10 15

Xaa Ala Xaa  
20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
35 40

<210> 67

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD\_RES

<222> (1)

<223> 4-imidazolylpropionyl-Gly

<220>

<221> MOD\_RES

<222> (26)

<223> Lys-NH-octanoyl

<220>

<223> May be c-term amidated

<400> 67

Xaa Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Xaa Asn  
20 25

<210> 68

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD\_RES

<222> (1)

<223> 4-imidazolylpropionyl-Gly

<220>

<221> MOD\_RES

<222> (26)

<223> Lys-NH-octanoyl

<220>

<223> May be c-term amidated

<400> 68

Xaa Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Xaa Asn  
20 25

<210> 69

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD\_RES

<222> (1)

<223> 4-imidazolylpropionyl-Gly

<220>

<221> MOD\_RES

<222> (26)

<223> Lys-NH-octanoyl

<220>

<223> May be c-term amidated

<400> 69

Xaa Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Xaa Asn Gly Gly  
20 25

<210> 70

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD\_RES  
<222> (1)  
<223> 4-imidazolylpropionyl-Gly

<220>  
<221> MOD\_RES  
<222> (26)  
<223> Lys-NH-octanoyl

<220>  
<223> May be c-term amidated

<400> 70  
Xaa Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Xaa Asn Gly Gly  
20 25

<210> 71  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (1)  
<223> 4-imidazolylpropionyl-Gly

<220>  
<221> MOD\_RES  
<222> (27)  
<223> Lys-NH-octanoyl

<220>  
<223> May be c-term amidated

<400> 71  
Xaa Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15  
  
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Asn Xaa  
20 25

<210> 72  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (1)  
<223> 4-imidazolylpropionyl-Gly

<220>  
<221> MOD\_RES  
<222> (27)  
<223> Lys-NH-octanoyl

<220>  
<223> May be c-term amidated

<400> 72  
Xaa Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Asn Xaa  
20 25

<210> 73  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (1)  
<223> 4-imidazolylpropionyl-Gly

<220>  
<221> MOD\_RES  
<222> (27)  
<223> Lys-NH-octanoyl

<220>  
<223> May be c-term amidated

<400> 73  
Xaa Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Asn Xaa Gly Gly  
20 25

<210> 74  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (1)  
<223> 4-imidazolylpropionyl-Gly

<220>  
<221> MOD\_RES  
<222> (27)  
<223> Lys-NH-octanoyl

<220>  
<223> May be c-term amidated

<400> 74  
Xaa Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu  
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Asn Xaa Gly Gly  
20 25

<210> 75  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (3)  
<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-Alkylglycine, N-alkylpentylglycine,  
or N-alklalanine

<220>  
<223> May be c-term amidated

<400> 75  
Gly Gly Xaa Ser Ser  
1 5

<210> 76  
<211> 6

<212> PRT  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (3)  
<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-Alkylglycine, N-alkylpentylglycine,  
or N-alklalanine

<220>  
<223> May be c-term amidated

<400> 76  
Gly Gly Xaa Ser Ser Gly  
1 5

<210> 77  
<211> 7  
<212> PRT  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (3)  
<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-Alkylglycine, N-alkylpentylglycine,  
or N-alklalanine

<220>  
<223> May be c-term amidated

<400> 77  
Gly Gly Xaa Ser Ser Gly Ala  
1 5

<210> 78  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic

peptide

<220>

<221> MOD\_RES

<222> (3)

<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-Alkylglycine, N-alkylpentylglycine,  
or N-alkylalanine

<220>

<221> MOD\_RES

<222> (8)

<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-Alkylglycine, N-alkylpentylglycine,  
or N-alkylalanine

<220>

<223> May be c-term amidated

<400> 78

Gly	Gly	Xaa	Ser	Ser	Gly	Ala	Xaa
1					5		

<210> 79

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
peptide

<220>

<221> MOD\_RES

<222> (3)

<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-Alkylglycine, N-alkylpentylglycine,  
or N-alkylalanine

<220>

<221> MOD\_RES

<222> (8)

<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-Alkylglycine, N-alkylpentylglycine,  
or N-alkylalanine

<220>

<221> MOD\_RES

<222> (9)

<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-Alkylglycine, N-alkylpentylglycine,  
or N-alkylalanine

<220>  
<223> May be c-term amidated

<400> 79  
Gly Gly Xaa Ser Ser Gly Ala Xaa Xaa  
1 5

<210> 80  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (3)  
<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-Alkylglycine, N-alkylpentylglycine,  
or N-alkylalanine

<220>  
<221> MOD\_RES  
<222> (8)  
<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-alkylglycine, N-alkylpentylglycine,  
or N-alkylalanine

<220>  
<221> MOD\_RES  
<222> (9)  
<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-alkylglycine, N-alkylpentylglycine,  
or N-alkylalanine

<220>  
<221> MOD\_RES  
<222> (10)  
<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline,  
N-alkylglycine, N-alkylpentylglycine,  
or N-alkylalanine

<220>  
<223> May be c-term amidated

<400> 80  
Gly Gly Xaa Ser Ser Gly Ala Xaa Xaa Xaa  
1 5 10

<210> 81  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<221> MOD\_RES  
<222> (3)  
<223> Pro, homoproline, thioproline,  
or N-methylalanine

<220>  
<223> May be c-term amidated

<400> 81  
Gly Gly Xaa Ser Ser  
1 5

<210> 82  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
<221> MOD\_RES  
<222> (3)  
<223> Pro, homoproline, thioproline,  
or N-methylalanine

<220>  
<223> May be c-term amidated

<400> 82  
Gly Gly Xaa Ser Ser Gly  
1 5

<210> 83  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
<221> MOD\_RES

<222> (3)  
<223> Pro, homoproline, thioproline,  
or N-methylalanine

<220>  
<223> May be c-term amidated

<400> 83  
Gly Gly Xaa Ser Ser Gly Ala  
1 5

<210> 84  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
<221> MOD\_RES  
<222> (3)  
<223> Pro, homoproline, thioproline,  
or N-methylalanine

<220>  
<221> MOD\_RES  
<222> (8)  
<223> Pro, homoproline, thioproline,  
or N-methylalanine

<220>  
<223> May be c-term amidated

<400> 84  
Gly Gly Xaa Ser Ser Gly Ala Xaa  
1 5

<210> 85  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
<221> MOD\_RES  
<222> (3)

<223> Pro, homoproline, thioproline,  
or N-methylalanine

<220>

<221> MOD\_RES

<222> (8)

<223> Pro, homoproline, thioproline,  
or N-methylalanine

<220>

<221> MOD\_RES

<222> (9)

<223> Pro, homoproline, thioproline,  
or N-methylalanine

<220>

<223> May be c-term amidated

<400> 85

Gly Gly Xaa Ser Ser Gly Ala Xaa Xaa  
1 5

<210> 86

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD\_RES

<222> (3)

<223> Pro, homoproline, thioproline,  
or N-methylalanine

<220>

<221> MOD\_RES

<222> (8)

<223> Pro, homoproline, thioproline,  
or N-methylalanine

<220>

<221> MOD\_RES

<222> (9)

<223> Pro, homoproline, thioproline,  
or N-methylalanine

<220>

<221> MOD\_RES

<222> (10)

<223> Pro, homoproline, thioproline,

or N-methylalanine

<220>

<223> May be c-term amidated

<400> 86

Gly Gly Xaa Ser Ser Gly Ala Xaa Xaa Xaa  
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<210> 87

<211> 38

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

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<223> Ser, Gly, Ala or Thr

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<222> (3)

<223> Ala, Asp, or Glu

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<222> (5)

<223> Ala or Thr

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<223> Ala, Phe, Tyr or naphthylalanine

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<223> Ile, Val, Leu, pentylglycine, tert-butylglycine, or Met

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<221> MOD\_RES

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or N-methylalanine, or not present

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or N-methylalanine, or not present

<220>  
<223> May be c-term amidated

<400> 87  
Xaa Xaa Xaa Gly Xaa  
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Xaa Ala Xaa  
20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa  
35